



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor: Cantor et al.
Serial No.: 09/395,409
Filed: September 14, 1999
For: SOLID PHASE SEQUENCING OF BIOPOLYMERS
Art Unit: 1656
Examiner: Houtteman, S.

I hereby certify that this paper and the attached papers are being deposited with the United States Postal Service as first class mail in an envelope addressed to:

Commissioner for Patents,
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Paula Schoeneck
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RESPONSE AFTER FINAL

Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Responsive to the Office Action, mailed June 19, 2001, consideration of the following remarks is respectfully requested. In addition, please amend the application as follows:

IN THE CLAIMS:

Please ~~cancel~~ claim 87 without prejudice or disclaimer.

Please replace claims 77, 86, 88 and 89 with amended claims 77, 86, 88 and 89 as follows:

B1

77. (Amended) A method of detecting a target nucleic acid, comprising the steps of:

providing a set of nucleic acid fragments each containing a sequence that corresponds to a sequence of the target nucleic acid;

hybridizing the set to an array of nucleic acid probes to form a target array of nucleic acids, wherein each probe comprises a single-stranded portion comprising a variable region; and

determining molecular weights for nucleic acids of the target array; whereby the target nucleic acid is detected.

B2

86. (Amended) The system of claim 127, wherein the array comprises a collection of probes with sufficient sequence diversity in the variable regions to hybridize all of the target sequence with complete diversity or nearly complete